

REMARKS

Applicant has deleted claims 1-10, 13-26, and 29. Applicant has amended claims 11, 12, 27, and 28.

(1) The Office Action rejected claims 1-12, 14, and 16-29 asserting that the specification does not enable one skilled in the art. The Examiner states that it is not clear from the specification or the claims which specific compound is heated in order to prepare the specific compounds claimed. In response, applicant has deleted claims 1-10, 14, 16-26, and 29 but reserves the right to pursue these claims in a divisional application. As to claims 11, 12, 27, and 28, the production methods of the compounds as set forth in these claims are fully supported by the present specification as follows:

4(9-adeninyl)-2-cyclopenten-1-one in Example 4;

4(9-guaniny)-2-cyclopenten-1-one in Example 5;

1,5-epoxy-1-hydroxy-3-penten-2-one in Example 5;

2-(3,4-dihydroxy-1-butenyl)-4-(2-formylvinyl)-1,3-dioxolane in Example 6;

and

a compound represented by the formula [I] in Example 11.

All of these compounds are novel and useful compounds having an apoptosis inducing activity. The apoptosis inducing activity of the compounds 4(9-adeninyl)-2-cyclopenten-1-one, 4(9-guaniny)-2-cyclopenten-1-one, 1,5-epoxy-1-hydroxy-3-penten-2-one, 2-(3,4-dihydroxy-1-butenyl)-4-(2-formylvinyl)-1,3-dioxolan is concretely demonstrated in Example 12, and the apoptosis inducing activity of the compound represented by the formula [I] is concretely demonstrated in Example 11.

Also, the antirheumatic activity of compounds 4(9-guaniny)-2-cyclopenten-1-one and 2-(3,4-dihydroxy-1-butenyl)-4-(2-formylvinyl)1,3-dioxolane is demonstrated in Example 15. Thus, claim 27, which relates to the pharmaceutical agent for therapy of rheumatism containing the compound 4(9-guaniny)-2-cyclopenten-1-one or 2-(3,4-dihydroxy-1-butenyl)-4-(2-formylvinyl)1,3-dioxolane is fully supported by the present specification.

Further, the suppression activity for NO production of the compound 2-(3,4-dihydroxy-1-butenyl)-4-(2-formylvinyl)1,3-dioxolane is demonstrated in Example 17. It is also disclosed in lines 9-18 of page 28 of the present specification that a compound having the suppression activity for NO production is useful for therapy of systemic hypotension, lowering in blood pressure response, autoimmune disease, inflammation, arthritis, rheumatic arthritis, diabetes mellitus, inflammatory intestine diseases, insufficiency of blood vessel function, etiological dilation of blood vessel, damages of tissues, cardiovascular ischemia, sensitivity to pain, cerebral ischemia, and diseases caused by angiogenesis. Thus, claim 28, which relates to the pharmaceutical agent for therapy of the above diseases containing the compound d. as an effective component is fully supported by the present specification.

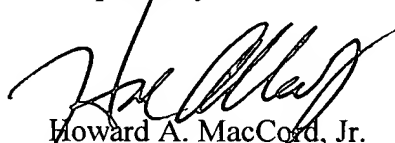
2) The Office Action rejected claims 1-10 and 16-25. The Examiner states that the method claims are indefinite in that it is not clear from the claims which specific pentoses are used to make which specific final products. However, this rejection is overcome because claims 1-10 and 16-25 are deleted from the present application.

3) The Office Action rejected claims 11, 12, 14, 27, and 29. The Examiner states that these claims are obvious or anticipated by Ikariya et al. and Rosenchein et al. As to 4, 5-dihydroxy-2-pentenal disclosed in Ikariya et al., the same is deleted from the present invention by this amendment.

Rosenchein et al. discloses N-acetylcystein and glutathione as an example of an antioxidant. The compounds disclosed in Rosenchein et al. apparently were believed to correspond to a "compound represented by the formula [I]" in the present invention. The "compound represented by the formula [I]" is, however, a thioether compound derived from a compound having an SH group and a cyclopentanone compound and thus the reduction activity (antioxidant activity) of SH group has been lost in the "compound represented by the formula [I]." Therefore, the apoptosis inducing activity of the compounds as set forth in the amended claims is not obvious from the disclosure of Rosenchein et al.

It is believed that this application is not in condition for immediate allowance and same is earnestly requested. Should the examiner have any further matters of concern, Applicant invites the Examiner to telephone the undersigned for expeditious response.

Respectfully submitted,


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